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Moving into the Teens by Dr. Martin L. Collis Professor Department of Physical Education University of Victoria

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Your body and you

"So often times it happens that we live our lives in chains And never even know we've got the key."

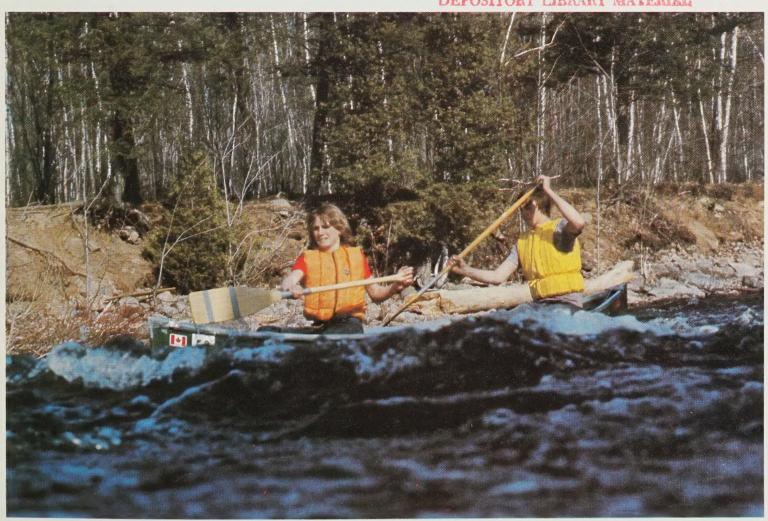
Eagles

When it comes to bodies there is only one per customer and the aim of this booklet is to help you get the most out of yours. In recent years we have heard a lot about ecology and concern for the environment; in some places lack of planning has led to polluted lakes where people cannot swim, smoggy cities where breathing is difficult and wasted energy which can never be replaced. It is the

same with personal ecology: your body needs a good balance of food, rest and activity, and if it does not get all three it's going to become your enemy. Your aim is to balance your body's budget. If your life is all junk food, study and T.V., there is no way you can reach your full potential.



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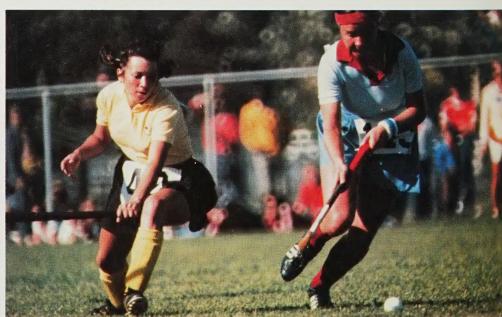
Born to run

Bruce Springsteen sang "Baby you're born to run" and he was right. Our bodies are designed to run and move, and if they do not, they will break down.

The activity message seems to be getting through. Nowadays more and more people are on the move. We expect individual athletes on such teams as the Canadiens, the Stampeders and the Expos to be fit. But in many ways it is more important for nonathletes to be fit, because they do not get regular activity in their job. To get the best out of yourself at anything you should be in shape.

Different people exercise in different ways. Many people like to head for the wilderness, the Hollywood set are into tennis, rock stars like Rod Stewart and Elton John get in a game of soccer whenever they can, John Travolta dances his way to fitness, Cheryl Tiegs swims, runs and does calisthenics, and everybody from Farrah Fawcett to Ken Read, of the national ski team, is into jogging.



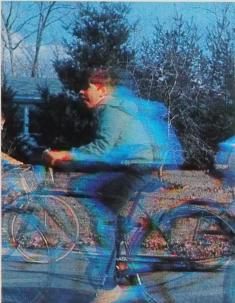


Fitness is



Stamina. The ability to keep going and to keep your muscles supplied with oxygen. This comes from endurance activities such as running, hiking, cycling, swimming, continuous ball games, continuous dancing and of course, cross-country skiing.

Strength. Not bulging muscles, but good muscle tone. Muscles must be used to work effectively. You've got to move to improve. Activities good for muscle tone include swimming, calisthenics, skiing, weight training, many sports and just about everything that involves a lot of running. Don't forget to add some activities for your arms and upper body. **Suppleness.** Refers to flexibility, that is free movement of the joints. It is important in determining how well you can move and perform activities without injury. **Structure.** Making the best of what you have got. You cannot change your bones, but you can make sure they are **not** layered with fat, and you can develop a posture that makes you look good.



In the movie 'Love Story' they played the 'Love is' game. For example, "Love is never having to say you're sorry". We can change this to the 'Fitness is' game. Fitness is:

- being proud of your body

getting the most out of life
 looking like the people in the

cigarette ads without smoking

– fun

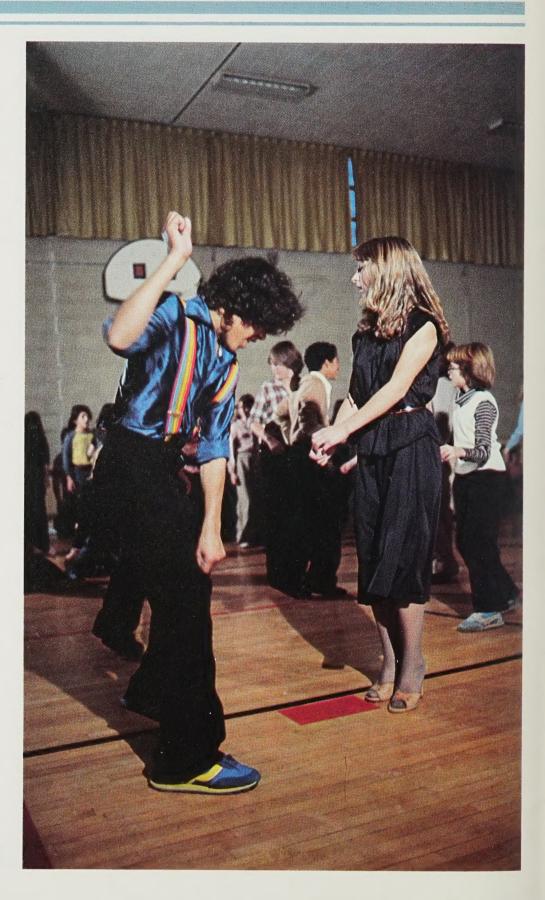
a proper diet without the gimmicks

Fitness is often described in terms of the 4 S's — Stamina, Strength, Suppleness and Structure.

The future is now

Now is the time to go on a canoe trip, sign up for a tennis class, get some running shoes, join the "Y", go camping, try out for basketball, lift some weights, get into modern dance, head for a skateboard park and ride your tenspeed. Now is the time because the longer you wait, the harder it gets. Skills learned while your body is still developing will be learned forever. Muscles that are challenged grow bigger and the heart that is worked hard grows stronger.

Many schools are now teaching so-called 'lifetime' sports. There are many advantages to this, as these sports will not only help you stay in shape but are a great way to make friends. So don't miss out on opportunities to learn to ski, play a racquet sport, improve your swimming, dance, bowl or golf. Bowling and golf may not help your fitness a great deal, but you will have fun, you will be active, and you won't be sitting around.



Measuring up

"You know it don't come easy" Ringo Starr

Competitive sports are not for everybody, but competition is. Beating another team or individual is exciting, but beating your own personal best performances is the

biggest thrill of all.

A friend of mine, in describing a marathon said: "Frank Shorter won the race in 2 hours 12 minutes; I won the same race in 3 hours 14 minutes. My position was 451st but that was the best time I ever ran." There are no losers in the marathon, everybody is a little better for having taken part.

People often ask the wrong questions after an athletic event. Questions such as, Did you win? Where did you place in the race?

You don't have to ask who was first, or who won For each person wins when their best they have done.

Martin Collis

There are many ways to be a winner. Climb a mountain you had never climbed before, master a new move on your skateboard, run your best time ever, get a place on a team that looked out of reach to you, do one more chin-up than you had ever done before, or try out for a sport which is new to you. One thing is for sure, you can't win if you don't try, if you just stand on the side and watch other people.

		11 YI	EAR OI	LDS		
	One Minus Sit-Ups (N Girls	te Speed Jumber) Boys		rm Hang onds) Boys	1600 n (Minutes & Girls	
90% Excellent	49	48	52.0	61.0	7:45	7:15
75% Good	43	42	31.0	42.0	8:45	7:46
50% Average	37	36	19.0	29.0	9:35	8:33
25% Fair	29	30	10.0	17.0	10:38	9:31
10% Needs More Work	20	23	4.0	7.0	11:52	11:02
12 YEAR OLDS						
90% Excellent	49	53	44.0	66.0	7:57	7:07
75% Good	44	46	30.0	48.0	8:42	7:33
50% Average	37	40	16.0	32.0	9:45	8:16
25% Fair	29	32	8.0	17.0	11:16	9:51
10% Needs More Work	20	25	2.9	8.0	12:26	11:28
13 YEAR OLDS						
90% Excellent	50	55	47.0	68.0	12:04	10:15
75% Good	45	49	34.0	54.0	13:00	11:09
50% Average	39	42	21.0	38.0	14:29	12:12
25% Fair	31	36	9.0	22.0	16:04	13:52
10% Needs More Work	25	28	4.0	12.0	17:34	15:24

		14 YI	EAR OI	LDS		
		ute Speed Number) Boys		rm Hang onds) Boys	1600 n (Minutes & Girls	
90% Excellent	49	55	44.0	72.0	12:03	10:10
75% Good	44	50	30.0	60.0	13:27	10:54
50% Average	39	44	19.0	46.0	14:57	11:52
25% Fair	31	37	9.0	30.0	16:24	13:28
10% Needs More Work	25	31	3.0	16.0	17:39	15:48
		15 YI	EAR OI	LDS		
90% Excellent	50	56	45.0	<i>7</i> 5.0	11:56	10:02
75% Good	43	51	31.0	62.0	12:35	10:40
50% Average	37	45	18.0	50.0	14:32	11:35
25% Fair	30	39	11.0	33.0	16:25	12:53
10% Needs More Work	24	32	5.0	19.0	17:45	14:33
		16 Yl	EAR OI	LDS		
90% Excellent	49	57	45.0	75.0	11:37	9:49
75% Good	44	50	33.0	64.0	12:46	10:24
50% Average	37	45	20.0	54.0	14:43	11:22
25% Fair	30	39	10.0	40.0	16:09	12:29
10% Needs More Work	28	32	3.0	27.0	17:50	14:20

Bob Dylan described the watchers: "You never understood
That it ain't no good
You shouldn't let other people
Get your kicks for you".

So competing against yourself is the key, but sometimes it's nice to know where you stand in relation to other Canadians of your age. For this reason we have included some fitness standards taken after measuring thousands of Canadians in a recent survey. A 90% level means that you are better than 90 people out of 100 in your age group, a 50% level means that you are right in the middle, and a 10% means that 90 out of 100 people your age can do better. Everybody can't be at the 90% level, or even at the 75% level, but remember whatever you do, from playing hockey to being a jockey, a good fitness level will help you do it better.

The figures from the above tables were taken from the recently published Manitoba School Physical Fitness Survey and some of you may have noticed a rather surprising pattern. The 14-year-old standards are about the same as the 13-year-old standards and in the case of the girls they are actually easier. This means that although the students involved are still growing (boys 7 cm taller; girls 3 cm taller), their performance is actually getting worse. At just the time they should be getting fast, strong and fit many of the students involved are getting slow, fat and have quit on themselves. If you're on the way down at 14, just imagine where you will be at 20.

He not busy being born is busy dying.

Bob Dylan

Obviously, if your results are to mean anything the tests have to be performed correctly. Just follow the instructions below.



One-Minute Speed Sit-up

You need someone to time you and to hold your feet down. Partner's hands are placed behind your knees as shown in the illustration, to prevent too much movement. Choose a gym mat or soft carpet to work on.

Begin by lying on your back, fingers interlaced behind your head. Curl up until elbows touch the knees and then return to the starting position (only shoulders need touch the floor). Score one for every time your elbows touch your knees. Exhale on the way up.







Flexed Arm Hang (Hang in there baby)

You need a bar which you can grasp which is about 2 m above the floor. Grab the bar as shown in the illustration so that the palms of your hands are towards your face. Start in a position in which your eyes are level with the bar,

and arms are bent. (You can be lifted into this position or use a chair). Hang in this position as long as possible. Have a friend count out the seconds until your eyes dip below the bar, at which time you stop.

1600/2400 m Run

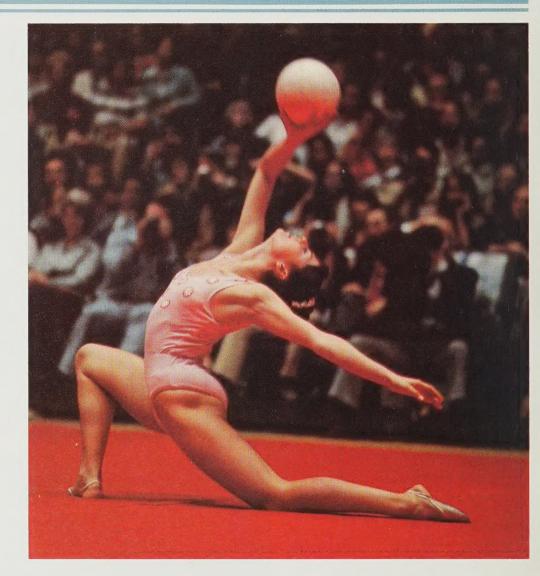
All you need is a track and a watch. If no track is available you can get a good estimate by having someone measure out a course for you using the odometer of a car.

Extra Test for Flexibility

Sit on the floor with your legs straight out in front of you and about 15 cm apart. Put a ruler or measuring tape on the floor between your legs, with the one cm mark towards you and the halfway mark level with your heels. Reach slowly forwards with both hands, fingers stretched, and reach as far down the ruler as you can. Keeping the fingers on the ruler pull it back towards you so you can check your result. Don't bounce to try and get further down the ruler, it could mean a pulled muscle or tendon.

Score yourself according to the number of centimeters either side of your heels that you reach. (Behind your heels are minus scores beyond your heels are plus scores.)





Excellent
Good
Satisfactory
Fair only
Get Stretching

More than 15 cm 8 to 15 cm 0 to 8 cm -8 cm to 0 Below -8 cm

The hit and myth approach



"Do you believe in magic?"John Sebastian

North America is often referred to as an 'instant society', which is fine for coffee, but not for fitness and health. People want to feel good, and there are plenty of con men and fast-buck artists who are prepared to tell them that it's easy and quick if they just buy the right product. So beware the flash fitness schemes and the crash diets. You don't need wobble boards, wonder wheels, magic muscle machines, miracle weight-loss tablets, bust-building and waisttrimming gadgets, and many more. You don't need them because in most cases they don't work. People who buy these gimmicks are often kidding themselves that by spending a few dollars they're really starting to get into shape.

Magazines will promise you whatever you want, big muscles, instant weight loss, 5-minute fitness plans, and other magical solutions. But the answers are not in magazine advertisements or in paperback books about biorhythms, pyramid power and astrology.

If it's fitness you want I have a machine and a 5-minute plan to keep you young and lean.
And if you pay me by the 15th of June, I'll throw in a T-shirt and some land on the moon.
You can eat all you want and lose lots of weight and tone up your muscles with machines that vibrate

And if you're left with residual ills, I'll clear them all up with my vitamin pills.

Martin Collis

If you want to feel good and look good don't listen to those sorts of promises. Be naturally good by giving your body the daily activity and balanced diet that it needs.

In answer to the question "Do you believe in magic?" the answer is 'yes'. The magic of each cell in the human body, the magic of coordinated movement, the magic of growth.

As a matter of fat

"Oh that this too too solid flesh Would melt, thaw and resolve itself into a dew."

William Shakespeare

Very, very few people have some sort of metabolic or glandular problem that makes them fat. In nearly every case a person is overweight because they put in more calories than they spend. (Putting in more than you spend is great for banking, but bad for

weight control.)

The Nutrition Canada Survey found that in general fat people don't eat a lot more than slim people, but they moved around a lot less. A number of school studies have shown that overweight kids are very clever at being inactive. In physical education they are first in line with excuses, and if they get into the gym they have a million ways of avoiding any vigorous activity.

Aboard the education train he got to junior high But he was a different Johnny Spain, he was growing up kind of slv He couldn't do cross-country, he had problems with his knees And every week old Johnny the Freak would develop a new disease

Martin Collis

When it comes to missing activity the only person you can cheat is yourself.

Just look in any beer hall and its full of Johnny Spains They're fat and tired at twentyfive and a lot of life remains.

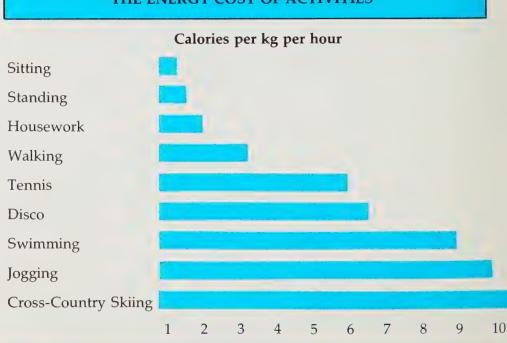
Daily physical activity uses energy in a cumulative manner. Every flight of stairs is a few calories, so



is every city block, and every dance. Remember, if you just starve yourself you will burn up fat and muscle and you will feel weak. If you cut down calories and increase activity you will burn off only fat and that's what you want to lose.

You can draw your own conclusions from the chart. One thing your parents won't like is that you burn calories twice as fast on a walk as you do doing housework. Another is that if you like to eat, you'd better not sit around.



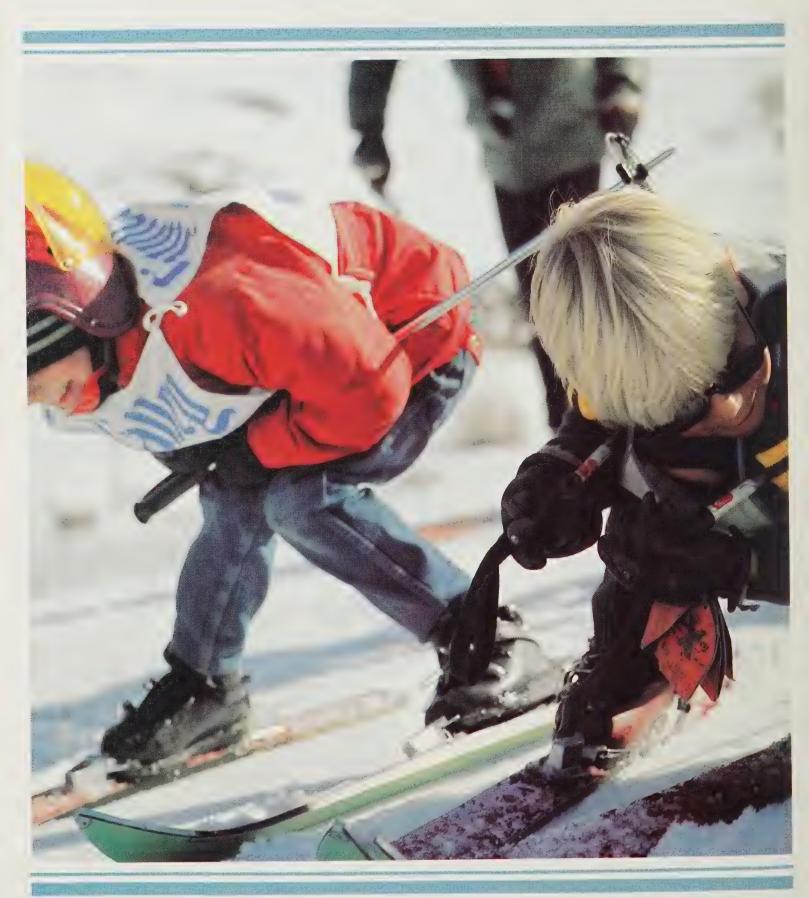


APPROXIMATE NUMBER OF CALORIES IN SOME FOODS

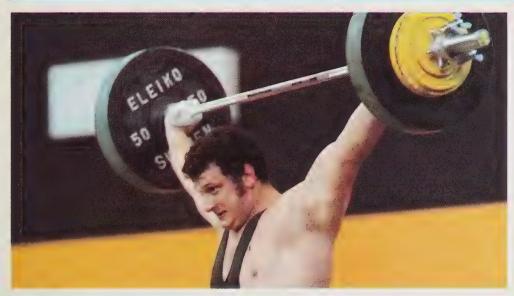
High-Calorie choices		Low-Calorie alternates	
milkshake	300	skim milk (227 ml)	85
3 pieces of fried chicken	650	half chicken breast, roasted	150
20 french fries	210	1 baked potato	90
soft drink (284 ml)	130	fruit juice with Vitamin C	130
1 piece of apple pie	410	1 fresh apple	70
1 banana split	500	1 hamburger	400
2 chocolate marshmallow cookies	150	4 whole-wheat crackers	110
doughnut and coffee with sugar	170	non-sugared cereal and milk	150

If you want to lose weight, do it the same way you put in on gradually. Don't try to crash it off in a couple of weeks. Cut down on the total amount of food eaten each day while maintaining a good program of physical activity. For a winning combination include a variety of foods from each of the four food groups. Cut down on desserts and empty calorie foods, and choose nutritious snacks such as yogurt, raw fruits and vegetables and cheese and crackers, devilled eggs or bread and peanut butter.





Strong feelings



Anybody can get strong. You can do it using your own body as a resistance, by doing such exercises as chins and push-ups, or by isometrics where you push and pull against yourself (e.g. one hand pulling against the other) or work against an immovable object. However, when most people think of strength training they usually think of weight lifting with barbells or with a weight training machine such as a Universal Gym.

Here are a few facts. Weight **lifting** is a sport where very strong individuals compete against each other in certain specialized lifts. Weight training involves a variety of resistance exercises to develop a good body and good muscle tone, or to prepare you for a particular sport. The heavier weight you lift, the stronger you will get, but all people beginning a strength training program should use fairly light weights that they can lift 10-15 times, so that they build up endurance, as well as strength, in the muscles being exercised.

Before starting a strength training program with weights consult your coach or physical education teacher, as, in order to avoid serious injury, weights must be lifted correctly.

A certain level of strength is essential in order to effectively learn to enjoy many sports and recreational activities. Strength can be developed without actually lifting weights but by engaging in activities that require lifting, pushing or pulling (e.g. carrying groceries, rowing, paddling). Girls can be assured that moderate strength training will not lead to bulging man-like muscles but will actually lead to a shapelier figure and firm muscles. Activities such as yoga and calisthenics help all-round development by improving the flexibility and endurance of muscles, as well as gradually increasing their strength and general tone.

Bringing it all back home

Most of your life isn't spent at school, it only seems that way. In fact with weekends, holidays and evenings most of your life is spent at home. Therefore, if you want to look your best and be your best, you have to think of getting some exercise at home, because however good your school physical education program is, it can't supply all your activity needs. (Some schools such as Okanagan Mission High School, a new high school in B.C., are really trying. At 11:15 every day, everything stops and the whole school runs - kids, teachers, secretaries and custodial staff. It's a great school.)

At home you can score a lot of points with your parents and get a work-out by volunteering for any high calorie jobs. Anytime you do a job such as shovelling snow, raking leaves, moving boxes, or mowing lawns you are helping the family and helping yourself at the same time. If you get a choice of doing dishes or walking to the store, the walk will do you more good, and maybe you'll meet one of your friends along the way.

Nearly everybody watches T.V. You can have a lot of fun designing an exercise program for the commercial breaks. For example, in the 5 minutes of commercials during a half-hour show, you can do some push-ups, sit-ups, toetouches, shoulder rolls, and isometrics. The lounge lizards might smile, but you'll always get the last laugh when it comes to feeling good.

5 MINUTE T.V. CIRCUIT (All you need is a chair)

Sit-Ups – for firm stomach muscles.

These are best done with bent legs and without holding your feet down.

Push-Ups - arms and chest

Leg Kicks — thighs Straight legs, toes pointed, flutter kick up and down. (30 sec.) For variation, cross them over and under.

It is difficult to sit still when you listen to good rock or disco music. So when you're playing music let the beat pace you for an aerobic (oxygen using) activity. Skip (if the ceiling is high enough), dance, run on the spot, or ride an indoor bike. Many exercise classes use music to create a good atmosphere for movement and you can too.

A fitness program in a house or apartment might not be the most exciting thing in the world, but it's a lot better than doing nothing. At the end of a bad day, in the middle of a dull day, at the start of a good day or just to relieve boredom, try a super circuit.

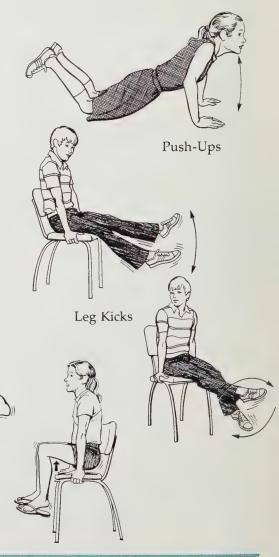
Isometrics

Isometrics — for arms and chest. Hold for 6 secs. and relax for 10 secs.
Perform each isometric twice.

Neck and Shoulder Flexibility Slowly and easily roll the head round, going forward, side, back, side. Shrug shoulders around in cir-

30 seconds each.

cular motion.



16 MINUTE SUPER CIRCUIT

Remember, smooth movement is the aim, don't force

your body into movements that are painful.

WARM-UP (2 minutes)

Arm Circles – large arm circles 8x forward 8x backward

Sidebends with Towel — take a towel and hold overhead. Slowly stretch to side while bending at waist, hold stretch briefly then straighten up. (5 bends to each side)

Toe Touches - With towel held overhead — Stand with legs wide apart, knees relaxed. Bend your knees as you reach down slowly and touch towel to ankle or toes, and then stretch it up high overhead.

Hamstring and Calf Stretch — Sitting with one knee bent and out to side, reach slowly forward to grasp ankle of straight leg and lower head towards knee. Hold for 5 to 15 seconds, then relax. Foot of straight leg should remain flexed.

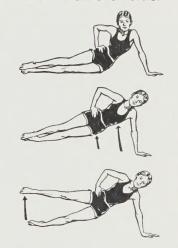


Repeat 2 or 3 times each leg.

Jog on the spot – for 15 seconds.

Side Hip and Leg Lift (30 seconds) Lie on side, one hand on floor supporting upper body. Lift hips, both feet on floor. Lift top leg off

floor. Return to floor. Lower weight to floor. Perform for 15 seconds on each side.



8 MINUTES of AEROBIC (oxygen using) ACTIVITY

Choose any one:
Running on the spot
Running around the block
Skipping
Riding an indoor exercise bike
Vigorous dancing

2 MINUTES (or more) of RELAXATION

Put on some quiet music, sit down, or better still, lie down, close your eyes and breathe deeply.

TOUGH STUFF (take 10 seconds between each activity)



Chair Dips (30 seconds)
This looks hard and it is hard.
Some of you will not be able
to do any. If so, put your toes
on the floor to give your arms
a little help as they extend

straight and bend down until the elbows are at a 90° angle.

Sit-Ups (30 seconds) See the section on "Measuring Up"

Jumping (30 seconds)
1. Stand relaxed. Flex knees and go half way down.
Straighten and jump up.
Continue in rhythmical manner for 15 seconds.
2. Stride jumping with arm action — 15 seconds.

Push-Ups (30 seconds) See T.V. Circuit.

A new you resolution

If you exercise regularly you can work harder by doing more repetitions or by actually increasing the amount of time for each activity.

Super circuit is fine for those who like it, but most important are the day to day activities that add up to a healthy lifestyle. Walk, don't ride the bus, use the stairs instead of the elevator, don't turn to the refrigerator to solve your problems and when in doubt, move. As it says in the song, "Little things mean a lot" and when it comes to fitness they certainly do.

"Living is nothing more than doing one thing instead of another."

Ortega

It's as easy as that and as difficult as that. Walk or take the bus, dance or watch T.V. all evening, don't smoke or "light up", participate or be a spectator, eat what you need or stuff yourself with food, respect your body or hate your body.

Like most things in life there is good news and bad news. The bad news is that a healthy lifestyle won't make a small person tall, won't change the shape of anybody's face or give a flat-chested girl a big bust. But now the good news. It will make a fat person slim, it can make a weak person strong, it will make you look better and feel better. It can be a beautiful spiral. Fit people feel good, and when you feel good you feel confident and confident people are attractive and attractive people....

Perhaps the biggest fitness myth is that only the exercise that hurts does you any good. If you hate

doing something, you won't do it for long, so don't waste your time doing exercises that make you miserable. Listen to your body, it will tell you what you need and what you want. You might start slowly, but with determination you can have something that every millionaire would give his money for, a young and healthy body.

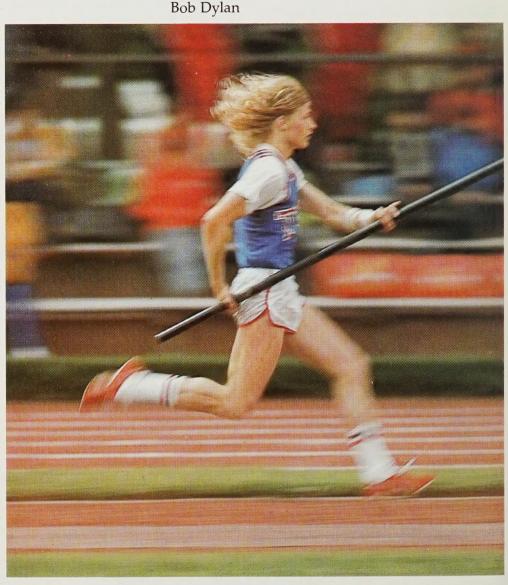
Ten thousand dollars at the drop of a hat. I'd give it all gladly If our lives could be like that.

petition, the natural high of continuous well co-ordinated movement, the rush of the climber or the high diver at a dangerous moment and the beautiful relaxation or exhaustion high after an all-out physical effort.

The activity highs come in many

forms. The adrenalin rush of com-

Do it your way, but do it. Make your body a better place to live in.



For more information on fitness programs contact:

Fitness Canada
Fitness and Amateur Sport
Secretary of State
Journal Building
365 Laurier Avenue W.
Ottawa, Ontario, K1A 0M5
or
Contact your provincial Ministry
responsible for Fitness and
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